



September 11, 2019

Arcelor Mittal USA, Inc.
250 W US Highway 12
Burns Harbor, IN 46304-9745

Work Order No.: 19H2018

Re: NPDES Parameters

Dear Teri Kirk:

Microbac Laboratories, Inc. - Chicagoland Division received 6 sample(s) on 8/31/2019 10:35:00AM for the analyses presented in the following report as Work Order 19H2018.

The enclosed results were obtained from and are applicable to the sample(s) as received at the laboratory. All sample results are reported on an "as received" basis unless otherwise noted.

All data included in this report have been reviewed and meet the applicable project specific and certification specific requirements, unless otherwise noted. A qualifications page is included in this report and lists the programs under which Microbac maintains certification.

This report has been paginated in its entirety and shall not be reproduced except in full, without the written approval of Microbac Laboratories.

We appreciate the opportunity to service your analytical needs. If you have any questions, please contact your project manager. For any feedback, please contact Ron Misiunas, Division Manager, at ron.misiunas@microbac.com.

Sincerely,
Microbac Laboratories, Inc.

A handwritten signature in black ink that reads "Carey Gadzala". The signature is written in a cursive, flowing style.

Carey Gadzala
Project Manager

[Microbac Laboratories, Inc.](http://www.microbac.com)

250 West 84th Drive | Merrillville, IN 46410 | 800.536.8379 p | 219.769.8378 p | 219.769.1664 f | www.microbac.com



WORK ORDER SAMPLE SUMMARY**Date:** *Wednesday, September 11, 2019*

Client: Arcelor Mittal USA, Inc.**Project:** NPDES Parameters**Lab Order:** 19H2018

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
19H2018-01	001-Composite	001	08/30/2019 00:00	8/31/2019 10:35:00AM
19H2018-02	001-Grab	001	08/30/2019 00:00	8/31/2019 10:35:00AM
19H2018-03	011-Composite	011	08/30/2019 00:00	8/31/2019 10:35:00AM
19H2018-04	011-Grab	011	08/30/2019 00:00	8/31/2019 10:35:00AM
19H2018-05	002-Composite	002	08/30/2019 00:00	8/31/2019 10:35:00AM
19H2018-06	002-Grab	002	08/30/2019 00:00	8/31/2019 10:35:00AM

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Field Results

Date: *Wednesday, September 11, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order:	19H2018
Client Project:	NPDES Parameters		
Client Sample ID:	001-Grab	Work Order/ID:	19H2018-02
Sample Description:	001	Sampled:	08/30/2019 00:00
Matrix:	Aqueous	Received:	08/31/2019 10:35

Analyses	Result	Units
FLD_CL_TITR	0.00	mg/L
pH	7.8	pH Units

Client Sample ID:	011-Grab	Work Order/ID:	19H2018-04
Sample Description:	011	Sampled:	08/30/2019 00:00
Matrix:	Aqueous	Received:	08/31/2019 10:35

Analyses	Result	Units
FLD_CL_TITR	0.00	mg/L
pH	7.8	pH Units

CASE NARRATIVEDate: *Wednesday, September 11, 2019*

Client: Arcelor Mittal USA, Inc.
Project: NPDES Parameters
Lab Order: 19H2018

The Total Suspended Solids method residue requirement of 2.5 mg were not met for the following sample(s).
Due to insufficient sample volume remaining, re-analysis was not performed on the sample(s).

<u>Laboratory ID</u>	<u>Sample Name</u>
19H2018-01	001-Composite
19H2018-03	011-Composite

The Matrix Spike and Matrix Spike Duplicate failed the accuracy criteria for phenol with a low bias. The precision criteria were met. A Post Digestion Spike was performed and the acceptance criteria met, indicating accurate measurement at the instrument. The following sample was spiked:

<u>Laboratory ID</u>	<u>Sample Name</u>
19H2018-03	011-Composite

This report was revised on 09/04/2019 to report the average of the Ammonia results for the following sample .

<u>Laboratory ID</u>	<u>Sample Name</u>
19H2018-01	001-Composite

This correction affects the final results initially reported on 08/31/2019.

Analytical Results

Date: Wednesday, September 11, 2019

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H2018-01
Client Project:	NPDES Parameters	Sampled:	08/30/2019 0:00
Client Sample ID:	001-Composite	Received:	08/31/2019 10:35
Sample Description:	001		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
Method: EPA 200.7 Rev 4.4									
Analyst: RPL									
Prep Date/Time: 08/31/2019 11:33									
Total Recoverable Metals by ICP									
Copper	ejj	A	0.0038	0.0013	0.010		mg/L	1	08/31/2019 14:08
Lead	ejj	A	ND	0.0033	0.0075	U	mg/L	1	08/31/2019 14:08
Zinc	ejj	A	ND	0.0073	0.020	U	mg/L	1	08/31/2019 14:08
Method: EPA 200.8 Rev 5.4									
Analyst: BTM									
Prep Date/Time: 09/08/2019 12:49									
Total Recoverable Metals by ICP/MS									
Silver	ejj	A	ND	0.000053	0.00060	U	mg/L	1	09/09/2019 13:12
Method: SM 4500-CN C/E-1999									
Analyst: ABG									
Prep Date/Time: 08/31/2019 11:22									
Total Cyanide									
Cyanide, Total	ejj	A	0.0022	0.0020	0.0050		mg/L	1	08/31/2019 15:13
Method: SW-846 9014									
Analyst: ABG									
Prep Date/Time: 08/31/2019 14:20									
Free Cyanide									
Free Cyanide		A	ND		0.0062		mg/L	1	08/31/2019 15:18
Method: EPA 420.4 Rev 1.0									
Analyst: ABG									
Prep Date/Time: 08/31/2019 11:40									
Total Phenolics									
Phenolics, Total Recoverable	ejj	A	ND	0.0060	0.010	U	mg/L	1	08/31/2019 16:11
Method: SM 2540 D-1997									
Analyst: AJR									
Prep Date/Time: 08/31/2019 10:44									
Total Suspended Solids									
Total Suspended Solids	ejj	A	2.0	1.0	1.0		mg/L	1	08/31/2019 12:20

Analytical Results

Date: *Wednesday, September 11, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H2018-01RE3
Client Project:	NPDES Parameters	Sampled:	08/30/2019 0:00
Client Sample ID:	001-Composite	Received:	08/31/2019 10:35
Sample Description:	001		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
Method: EPA 350.1 Rev 2.0					Analyst: ABG				
Nitrogen, Ammonia as N									
Prep Date/Time: 09/03/2019 11:05									
Nitrogen, Ammonia (As N)	ei	A	0.48	0.054	0.10		mg/L	1	09/03/2019 13:01

Analytical Results

Date: Wednesday, September 11, 2019

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H2018-02
Client Project:	NPDES Parameters	Sampled:	08/30/2019 0:00
Client Sample ID:	001-Grab	Received:	08/31/2019 10:35
Sample Description:	001		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: EPA 1664B			Analyst: AJR			
Oil & Grease (HEM) by SPE									
Oil & Grease (HEM)	ejj	A	ND	0.03	0.1	U	mg/L	.021276	08/31/2019 13:38

Analytical Results

Date: Wednesday, September 11, 2019

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H2018-03
Client Project:	NPDES Parameters	Sampled:	08/30/2019 0:00
Client Sample ID:	011-Composite	Received:	08/31/2019 10:35
Sample Description:	011		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: EPA 200.7 Rev 4.4			Analyst: RPL			
Total Recoverable Metals by ICP						Prep Date/Time: 08/31/2019 11:33			
Lead	ejj	A	ND	0.0033	0.0075	U	mg/L	1	08/31/2019 14:23
Zinc	ejj	A	ND	0.0073	0.020	U	mg/L	1	08/31/2019 14:23
			Method: SM 4500-CN C/E-1999			Analyst: ABG			
Total Cyanide						Prep Date/Time: 08/31/2019 11:22			
Cyanide, Total	ejj	A	0.0025	0.0020	0.0050		mg/L	1	08/31/2019 15:14
			Method: SW-846 9014			Analyst: ABG			
Free Cyanide						Prep Date/Time: 08/31/2019 14:20			
Free Cyanide		A	ND		0.0062		mg/L	1	08/31/2019 15:19
			Method: EPA 350.1 Rev 2.0			Analyst: ABG			
Nitrogen, Ammonia as N						Prep Date/Time: 08/31/2019 11:38			
Nitrogen, Ammonia (As N)	ei	A	0.24	0.054	0.10		mg/L	1	08/31/2019 15:18
			Method: EPA 420.4 Rev 1.0			Analyst: ABG			
Total Phenolics						Prep Date/Time: 08/31/2019 11:40			
Phenolics, Total Recoverable	ejj	A	ND	0.0060	0.010	U	mg/L	1	08/31/2019 16:13
			Method: SM 2540 D-1997			Analyst: AJR			
Total Suspended Solids						Prep Date/Time: 08/31/2019 10:44			
Total Suspended Solids	ejj	A	1.9	1.0	1.0		mg/L	1	08/31/2019 12:20

Analytical Results

Date: Wednesday, September 11, 2019

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H2018-04
Client Project:	NPDES Parameters	Sampled:	08/30/2019 0:00
Client Sample ID:	011-Grab	Received:	08/31/2019 10:35
Sample Description:	011		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed	
			Method: EPA 1664B				Analyst: AJR			
Oil & Grease (HEM) by SPE										
Prep Date/Time: 08/31/2019 10:55										
Oil & Grease (HEM)	ejj	A	ND	1.4	5.0	U	mg/L	1	08/31/2019 13:38	

Analytical Results

Date: *Wednesday, September 11, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H2018-05
Client Project:	NPDES Parameters	Sampled:	08/30/2019 0:00
Client Sample ID:	002-Composite	Received:	08/31/2019 10:35
Sample Description:	002		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
				Method: SM 4500-CN C/E-1999			Analyst: ABG		
Total Cyanide									
Prep Date/Time: 08/31/2019 11:22									
Cyanide, Total	ejj	A	ND	0.0020	0.0050	U	mg/L	1	08/31/2019 15:16

Analytical Results

Date: Wednesday, September 11, 2019

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H2018-06
Client Project:	NPDES Parameters	Sampled:	08/30/2019 0:00
Client Sample ID:	002-Grab	Received:	08/31/2019 10:35
Sample Description:	002		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed	
			Method: EPA 1664B				Analyst: AJR			
Oil & Grease (HEM) by SPE										
Prep Date/Time: 08/31/2019 10:55										
Oil & Grease (HEM)	ejj	A	ND	1.4	5.0	U	mg/L	1	08/31/2019 13:38	

ANALYTE TYPES: (AT)

A, B = Target Analyte

I = Internal Standard

M = Summation Analyte

S = Surrogate

T = Tentatively Identified Compound (TIC, concentration estimated)



QC SAMPLE IDENTIFICATIONS

BLK = Method Blank

DUP = Method Duplicate

BS = Method Blank Spike

MS = Matrix Spike

ICB = Initial Calibration Blank

CCB = Continuing Calibration Blank

CRL = Client Required Reporting Limit

PDS = Post Digestion Spike

QCS = Quality Control Standard

ICSA = Interference Check Standard "A"

ICSAB = Interference Check Standard "AB"

BSD = Method Blank Spike Duplicate

MSD = Matrix Spike Duplicate

ICV = Initial Calibration Verification

CCV = Continuing Calibration Verification

OPR = Ongoing Precision and Recovery Standard

SD = Serial Dilution

CERTIFICATIONS (Certs)

Below is a list of certifications maintained by the Microbac Merrillville Laboratory. All data included in this report has been reviewed for and meets all project specific and quality control requirements of the applicable accreditation, unless otherwise noted. Complete lists of individual analytes pursuant to each certification below are available upon request.

d Illinois EPA drinking water, wastewater and solid waste analysis (#200064)

i Kansas Dept Health & Env. NELAP (#E-10397)

j Kentucky Wastewater Laboratory Certification Program (#108202)

FLAGS, FOOTNOTES AND ABBREVIATIONS (as needed)**MDL:** Minimum Detection Limit**RL:** Reporting Limit**RPD:** Relative Percent Difference**U:** The analyte was analyzed for but was not detected above the reported quantitation limit. The quantitation limit has been adjusted for any dilution or concentration of the sample.

Cooler Receipt Log

Cooler ID: Default Cooler

Temp: 3.6°C
 MICROBAC®

Comments

No time

Cooler Inspection Checklist

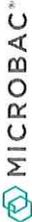
Ice Present or not required?	Yes
Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes
Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes
Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes
Sample type identified on COC?	Yes
Correct type of Containers Received	Yes
Correct number of containers listed on COC?	No
Containers Intact?	Yes
COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes
Sample labels match COC (Name, Date & Time?)	No
Samples arrived within hold time?	Yes
Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes
Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes

Microbac Laboratories, Inc.

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RUSH!

CHAIN OF CUSTODY RECORD



Number **152283**

Instructions on back

TO BE COMPLETED BY MICROBAC

Turnaround Time

Temperature Upon Receipt (°C) **4.04**

Therm ID

Holding Time

Samples Received on Ice? Yes No N/A

Custody Seals Intact? Yes No N/A

Routine (5 to 7 business days)

RUSH* (notify lab)

(needed by)

Report Type

Results Only Level 1 Level 2 Level 3 Level 4 EDD

Send Invoice via: Mail Fax e-mail (address)

PO No.:

Compliance Monitoring? Yes No

Agency/Program

Sampler Phone No.:

Sampler Signature:

Sampler Signature: *Chet Dublin*

Location:

City, State, Zip:

Contact:

Telephone No.:

Send Report via: Mail Fax e-mail (address)

Project:

Sampled by (PRINT): *Chet Dublin*

Matrix Types: Soil/Solid (S), Sludge, Oil, Wipe, Drinking Water (DW), Groundwater (GW), Surface Water (SW), Waste Water (WW), Other (specify)

Preservative Types: (1) HNO3, (2) H2SO4, (3) HCl, (4) NaOH, (5) Zinc Acetate, (6) Methanol, (7) Sodium Bisulfate, (8) Sodium Thiosulfate, (9) Hexane, (U) Unpreserved

Requested Analysis

Client Sample ID

Date Collected

Time Collected

No. of Containers

Matrix

Grab / Comp

Preservative Types **

Ammonia

TSS

Metals

As Pb Cd

PH

FOG

Additional Notes

19H2018

001

8/30/19

8:30

2

U

Invoice Address

Client Name:

Address:

City, State, Zip:

Contact:

Telephone No.:

Send Report via: Mail Fax e-mail (address)

PO No.:

Compliance Monitoring? Yes No

Agency/Program

Sampler Phone No.:

Sampler Signature:

Sampler Signature: *Chet Dublin*

Location:

City, State, Zip:

Contact:

Telephone No.:

Send Report via: Mail Fax e-mail (address)

Project:

Sampled by (PRINT): *Chet Dublin*

Matrix Types: Soil/Solid (S), Sludge, Oil, Wipe, Drinking Water (DW), Groundwater (GW), Surface Water (SW), Waste Water (WW), Other (specify)

Preservative Types: (1) HNO3, (2) H2SO4, (3) HCl, (4) NaOH, (5) Zinc Acetate, (6) Methanol, (7) Sodium Bisulfate, (8) Sodium Thiosulfate, (9) Hexane, (U) Unpreserved

Requested Analysis

Client Sample ID

Date Collected

Time Collected

No. of Containers

Matrix

Grab / Comp

Preservative Types **

Ammonia

TSS

Metals

As Pb Cd

PH

FOG

Additional Notes

19H2018

001

8/30/19

8:30

2

U

Lab Report Address

Client Name: *ArcelorMittal BH*

Address:

City, State, Zip:

Contact: *Teri Kirk*

Telephone No.:

Send Report via: Mail Fax e-mail (address)

PO No.:

Compliance Monitoring? Yes No

Agency/Program

Sampler Phone No.:

Sampler Signature:

Sampler Signature: *Chet Dublin*

Location:

City, State, Zip:

Contact:

Telephone No.:

Send Report via: Mail Fax e-mail (address)

Project:

Sampled by (PRINT): *Chet Dublin*

Matrix Types: Soil/Solid (S), Sludge, Oil, Wipe, Drinking Water (DW), Groundwater (GW), Surface Water (SW), Waste Water (WW), Other (specify)

Preservative Types: (1) HNO3, (2) H2SO4, (3) HCl, (4) NaOH, (5) Zinc Acetate, (6) Methanol, (7) Sodium Bisulfate, (8) Sodium Thiosulfate, (9) Hexane, (U) Unpreserved

Requested Analysis

Client Sample ID

Date Collected

Time Collected

No. of Containers

Matrix

Grab / Comp

Preservative Types **

Ammonia

TSS

Metals

As Pb Cd

PH

FOG

Additional Notes

19H2018

001

8/30/19

8:30

2

U

Possible Hazard Identification

Hazardous Non-Hazardous Radioactive

Sample Disposition Dispose as appropriate Return Archive

Relinquished By (signature) *W. J. Z...*

Date/Time *8/31/19 10:35*

Relinquished By (signature) *W. J. Z...*

Date/Time *8/31/19 10:35*

Relinquished By (signature) *W. J. Z...*

Date/Time *8/31/19 10:35*

Relinquished By (signature) *W. J. Z...*

Date/Time *8/31/19 10:35*

Relinquished By (signature) *W. J. Z...*

Date/Time *8/31/19 10:35*

Comments

001

PH 7.8

TRK 0.00

001

PH 7.8

TRK 0.00

001

PH 7.8

TRK 0.00

001

PH 7.8



08/31/2019

Carey Gadzala

ArcelorMittal - Burns Harbor, IN

NPDES Parameters